# Port Hadlock Naval Ordnance Center

**Pacific Division Attachment** **NPL**

**Size:** 2,716 acres
**Mission:** Receive, store, maintain, and issue ordnance
**HRS Score:** 50.00; placed on NPL in May 1994
**IAG Status:** IAG signed in August 1996
**Contaminants:** TNT, RDX, heavy metals, PCBs, and VOCs
**Media Affected:** Groundwater, surface water, sediment, and soil
**Funding to Date:** $7.2 million
**Estimated Cost to Completion (Completion Year):** $5.6 million (FY2006)
**Final Remedy in Place or Response Complete Date for All Sites:** FY2006

***Port Hadlock, Washington***

## Restoration Background

Since FY84, environmental investigations at this installation have identified 17 sites. The primary sources of contamination are landfills and ordnance disposal sites. Environmental investigations have focused on cleaning up existing, and preventing future, contamination of shellfish beds near the installation. Contaminants can migrate by overland flow into bays or through soil to the sea-level aquifer. The bays near Port Hadlock are used for both recreational and commercial fishing. An investigation completed in FY88 found trace metals (including lead), organics, and petroleum hydrocarbons in shellfish near the North End Landfill. A study in FY93 produced similar results.

In FY87, a tank was removed and field monitoring of explosive gas concentrations was completed at the buried Imhoff tanks. A Remedial Action (RA) for the site involved installation of piping and fans to vent methane gas from the tanks. Two Removal Actions were completed in FY91. One involved removing abandoned underground storage tanks (USTs); the other included removal of one UST and excavation and disposal of associated petroleum-contaminated soil. The installation performed an additional Removal Action at this second site in FY94, removing petroleum-contaminated soil and disposing of it at an off-site landfill.

In FY95, Interim Remedial Actions (IRAs) were completed at three sites. At two sites, soil contaminated with ordnance was removed and disposed of off site. At the third site, sediment containing polyaromatic hydrocarbons (PAHs) was removed. The two ordnance-contaminated sites are located in an area used by Native American tribes, prompting concerns about archaeological and cultural resources. A Record of Decision (ROD) for no further action (NFA) was signed for these sites and three others. Erosion and groundwater discharge from Site 10 (a landfill) have contributed to contamination of surrounding beaches and had significant influence on National Priorities List (NPL) scoring. A ROD was signed designating capping for the landfill and installation of a seawall to minimize erosion. The installation used biogeoengineering techniques to prevent shoreline erosion.

During FY96, the installation completed the Remedial Design at Sites 10, 11, 12, 18, and 21, and the RA at Site 18. The Navy and the National Council of Historic Places signed a Memorandum of Agreement to protect archaeological remains during construction of the RA. The tribes also signed after consultation.

Compliance monitoring continued at one site and began at another during FY96. A Removal Action was initiated at Site 34 (an open burning and open detonation area that was identified in FY95), groundwater monitoring began at Site 21, and compliance monitoring continued at Site 12. The Navy, EPA Region 10, and the State of Washington signed an Interagency Agreement (IAG) for eight sites.

During FY97, an RA was completed at Site 10, operations and maintenance (O&M) activities and compliance monitoring for groundwater began, and site investigations were initiated at Sites 33 and 35. An early action at Site 10 was performed to prevent erosion. At Site 34, an IRA and a Site Inspection (SI) were completed and the site was proposed for NFA.

The installation's technical review committee, which was formed in FY88, was converted to a Restoration Advisory Board (RAB) in FY95. The RAB includes 30 members who represent regulatory agencies, local Native American tribes, and neighboring communities. A community relations plan was developed in FY92 and revised in FY96. The installation also distributed fact sheets covering such topics as state involvement and oversight, the Site Hazard Assessment program, the results of shellfish and sediment sampling, and the results of cleanups.

## FY98 Restoration Progress

O&M and compliance monitoring for groundwater were completed. Site investigations were completed at Sites 33 and 35, and both sites were proposed as NFA sites. Compliance monitoring continued at Sites 12 and 21, which must await regulatory acceptance before response is complete.

## Plan of Action

- Begin SI at Site 36 in FY99
- Complete sampling at Sites 12 and 21 in FY99
- Complete risk analysis of sediment and shellfish for Site 10 in FY99
- Conduct long-term monitoring of groundwater and long-term operations until 2002

## FY99 Funding by Phase and Relative Risk